



west virginia department of environmental protection

Office of Oil and Gas
601 57th Street SE
Charleston, WV 25304
(304) 926-0450
(304) 926-0452 fax

Earl Ray Tomblin, Governor
Randy C. Huffman, Cabinet Secretary
www.dep.wv.gov

December 05, 2013

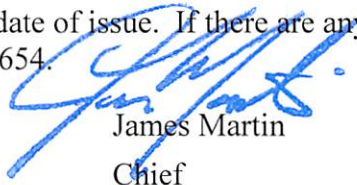
WELL WORK PLUGGING PERMIT

Plugging

This permit, API Well Number: 47-2103114, issued to EQT PRODUCTION COMPANY, is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to all conditions and provisions outlined in the pages attached hereto. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas inspector.

Upon completion of the plugging well work, the above named operator will reclaim the site according to the provisions of WV Code 22-6-30. The above named operator will also file, as required in WV Code 22-6-23, an affidavit on form WR-38 by two experienced persons in the operator's employment and the Oil and Gas inspector that the work authorized under this permit was performed and a description given. Failure to abide by all statutory and regulatory provisions governing all duties and operations here under may result in suspensions or revocation of this permit and in addition may result in civil and/or criminal penalties being imposed upon the operator.

This permit will expire in two (2) years from date of issue. If there are any questions, please free to contact me at (304) 926-0499 ext. 1654.



James Martin
Chief

Operator's Well No: 653456 CAIN 987
Farm Name: CAIN, PEGGY ANN
API Well Number: 47-2103114
Permit Type: Plugging
Date Issued: 12/05/2013

Promoting a healthy environment.

PERMIT CONDITIONS

West Virginia Code § 22-6-11 allows the Office of Oil and Gas to place specific conditions upon this permit. Permit conditions have the same effect as law. Failure to adhere to the specified permit conditions may result in enforcement action.

CONDITIONS

1. In the event of an accident or explosion causing loss of life or serious personal injury in or about the well or while working on the well, the well operator or its contractor shall give notice, stating the particulars of the accident or explosion, to the oil and gas inspector and the Chief within twenty-four (24) hours.
2. Well work activities shall not constitute a hazard to the safety of persons.

Date: Oct. 31, 2013
Operator's Well
Well No. 653456 Cain 987
API Well No.: 47 021 - 03114

STATE OF WEST VIRGINIA
DIVISION OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS

APPLICATION FOR A PERMIT TO PLUG AND ABANDON

- 4) Well Type: Oil Gas X Liquid Injection Waste Disposal:
If Gas, Production X Or Underground storage Deep Shallow X
- 5) Elevation: 1024 Watershed: Crooked Run of Cedar Creek of Little Kanawha River
Location: Center 01 County: Gilmer 21 Quadrangle: Tanner 7.5' 634
District:
- 6) Well Operator EQT Production Company
120 Professional Place
Address: Bridgeport, WV 26330
- 7) Designated Agent: Rex C. Ray
Address: 120 Professional Place
Bridgeport, WV 26330
- 8) Oil & Gas Bryan Harris
Name: P.O. Box 157
Address: Volga WV 26238
- 9) Plugging Contractor:
Name: HydroCarbon Well Service
Address: PO BOX 995
Buckhannon, WV 26201
- 10) Work Order: The work order for the manner of plugging this well is as follows:
See Attachment for details and procedures.

RECEIVED
Office of Oil and Gas

DEC 05 2013

WV Department of
Environmental Protection

OFFICE USE ONLY

Notification must be given to the district oil and gas inspector 24 hours before permitted work can commence.

Work order approved by inspector

Date 12-4-13

PLUGGING PROGNOSIS - Weston

Cain, A.A. #987 (653456)

GILMER, COUNTY, WEST VIRGINIA

API # 47-021-03114

Center District

ELEVATION 1024'

BY: Craig Duckworth

DATE: 10/24/13

CURRENT STATUS:

10" csg @ 111'
 8 1/4" csg @ 731'
 6 5/8" csg @ 973'
 2" tbgr @ 1530' Packer at 1250'

TD @ 1530'

Fresh Water @ None Reported Salt Water @ None reported

1st Salt Sand @ 865' (estimate from 021-03125) Coal @ None reported

Gas shows @ None Reported

Oil Shows @ None Reported

Stimulation: Perforations at 1260' to 1280' & 1467' to 1487'

1. Notify State Inspector, **Bryan Harris 304-553-6087**, 24 hrs. Prior to commencing operations.
2. Attempt to pull 2" tbgr. If unable to pull, Free point above packer and shoot at free point.
3. TIH w/ tbgr @ 1487'; Set 277' C1A Cement Plug @ 1487' to 1210' (perfs 1487'-1467' & 1280'-1260')
4. TOOH w/ tbgr @ 1210; gel hole @ 1210' to 1023'.
5. TOOH w/ tbgr @ 1023'; Set 100' C1A Cement Plug @ 1023' to 923' (6 5/8" csg set @ 973')
6. Set a 100' C1A Cement Plug 50' In/Out of cut. Perf. all FW, Coal, Oil and Gas shows below 6 5/8" cut. Do not omit any plugs
7. TOOH w/ tbgr @ 915; gel hole @ 915' to 865'.
8. TOOH w/ tbgr @ 865'; Set 100' C1A Cement Plug @ 781' to 681' (Salt Sand 865' & 8 1/4" csg set 731')
9. Set a 100' C1A Cement Plug 50' In/Out of cut. Perf. all FW, Coal, Oil and Gas shows below 8 1/4" cut. Do not omit any plugs
10. TOOH w/ tbgr @ 681; gel hole @ 681' to 200'
10. TOOH w/ tbgr @ 200'; Set 200' C1A Cement Plug @ 200' to Surface (10" @ 111')
11. Top off as needed
12. Set Monument to WV-DEP Specifications
13. Reclaim Location & Road to WV-DEP Specifications

MUST TRY TO REMOVE ALL CASING POSSIBLE.

JMM

2103114P
Cain 987
653456
1-021-03114

180M643
CARNEGIE NATURAL GAS COMPANY

Map Sheet No. Glenville N. W. RECORD OF WELL Well No. 1-

Drilled on A. A. Cain Farm of 330 Acres, situated in 021-

Center XMAS District Gilmer County West Va. Lease No. E-9228- 03114

Shipping Point Toll Gate, W. Va. Foreman S. E. Nay WELL

Located _____ Commenced Setting Cleaning out Nov. 9,

Notified Gen'l Office _____ Notified Gen'l Office _____

Commenced _____ Completed Setting Cleaning out Jan. 26,

Completed Used Keystone Drg. Machine Notified Gen'l Office _____

Contractor _____ Contractor Company Keystone Machine

Address _____ Address _____

ROCK FORMATION	TOP	BOTTOM	REMARKS	PRESSURE AND VO
Conductor				1/4 Minute In 2" Tub.
Waynesburg Coal				1 " 1#
Mapleton Coal				2 " 3#
Pittsburgh Coal				3 " 4#
Little Dunkard			Depth was found to be 1530'	4 " 6#
Big Dunkard			Pulled tubing and cleaned out.	5 " 8#
Gas Sand			Rerun tubing with 2" x 6-5/8" Anchor Packer	10 " 14#
1st Salt Sand			set at 1250' Perforations at 1260 to 1280'	15 " 18#
2nd Salt Sand			and 1467 to 1487' Cave catcher at 1465'	30 " 27#
3rd Salt Sand				1 Hour 47#
Maxton Sand			Pulled on 8.625" casing and parted at 98'	Rock 80# 72 1
Little Lime			Casing set back in and screwed together.	Size of { Tubing 2
Pencil Cavo				{ Casing
Big Lime			Set back on 8.625" casing	Vol by Water In tub.
Big Injun			Pulled on 10.750" casing and parted at 48'	" " Manometer In Cas. Hk
Gantz Sand			Set casing back in and red mudded between	" " Pressure
50 Foot Sand			8.625" and 10.750".	
30 Foot Sand			Closed in 8.625" casing with 8 1/2" x 2" casing	CONNECTED TO MAIN
Gordon Stray			head,	
Gordon Sand			Gas in 2" tubing tested 31,000 cu ft.	Length of Line Fe
4th Sand			Gas in casing head tested 35,000 cu ft.	Size of Line In
5th Sand				DISCONNECTED FROM
Bayard Sand				
Elizabeth				Notified Lessor
Speechley				Abandoned
Tiona				Repacked
Bradford				With Foot

Total Depth 1530 Foot at \$ _____ per Foot \$ _____

Gas Furnished at _____ Cents per Foot _____

CASING RECORD

SIZE	CHARGED TO WELL		PUT IN WELL		PULLED		LEFT IN WELL		TRANSFERRED		LEFT AT WELL		PACKER
	Foot	In.	Foot	In.	Foot	In.	Foot	In.	Foot	In.	Foot	In.	
10.75"	159		111				111		48				Kind <u>Anchor</u>
8.625"	829		731				731		98				Size <u>2" x 6-5/8"</u>
7.000"	1019		973				973		46				Set at <u>1250</u>
2"	2722		1530				S-10' 1530		1182				Perf. at <u>1260-804</u>
													Cave catcher at <u>146</u>
													By <u>WELL SHOT</u>
													With <u>Qls. at</u>

Casing Cemented in Well _____ by _____ Company

21031140

CARNEGIE NATURAL GAS COMPANY 655861

Map Sheet No. *Blount NW* RECORD OF WELL Well No. *300*
 Drilled on *D. H. Miller* Farm of *300* Acres, situate in *021-031*
Center Township *Blount* County *Blount* Lease No. *521*
 Shipping Point Foreman

RIG
 Located *Box 20-1926*
 Notified Gen'l Office
 Commenced *Feb 21 1927*
 Completed *Feb 28 1927*
 Contractor *Welford Pratt*
 Address *Weston, W. Va.*

WELL
 Commenced Drilling *April 6 19*
 Notified Gen'l Office
 Completed Drilling *April 26*
 Notified Gen'l Office
 Contractor *W. E. Galt Drilling*
 Address *Jettaburg, W. Va.*

ROCK FORMATION	TOP	BOTTOM	REMARKS	PRESSURE AND VC
Conductor	16		ELEVATION 1130'	1/2 Minute
Mapleton Coal				1 " 95
Pittsburgh Coal		none		2 " 135
Little Dunkard	325	375		3 " 150
Big Dunkard	537	540		4 " 165
Gas Sand	850	930	show gas at 900	5 " 175
1st Salt Sand	965	1055	covered that test	10 "
2nd Salt Sand	1115	1275	show gas at 1390. note	15 "
3rd Salt Sand	1330	1475	Gas at 1509-1514	30 "
Maxton Sand	1490		8/10 Mercury 2"	
Little Lime				1 Hour
Pencil Cave				Rock 225
Big Lime				Size of Tubing 2"
Big Injun				Casing
Gantz Sand				Vol. by Water
50 Foot Sand				" " Mercury 8/10
30 Foot Sand				" " Pressure
Gordon Stray				
Gordon Sand				CONNECTED TO MAIN
4th Sand				Aug 27 - 27
5th Sand				Length of Line 1605
Bayard Sand				Size of Line 2"
Elizabeth				DISCONNECTED FROM
Speechley				turned in line as
Bradford				certified by

Sampled water 16 days with
spring at Box 20

Total Depth 1536 Feet at \$

per Foot \$

Carnegie Nat Gas used Gas Furnished at

Cents per Foot

CASING RECORD

SIZE	CHARGED TO WELL	PUT IN WELL	PULLED	LEFT IN WELL	TRANSFERRED	LEFT AT WELL	PACKER
	Feet	In.	Feet	In.	Feet	In.	
10" 185	145		145	none		185	Kind 6 5/8 x 3"
8 1/4 859	793		793	none		66	Size Anchor
6 5/8 1865	1636		1536		329		Set at 12 1/2
2" 1548	1536		1536		12		WELL SHOT

Office of Oil and Gas

With NOV 01 2013

Casing Cemented in Well

by

Company

WV Department of
 Environmental Protection

1) Date: Oct. 31, 2013
2) Operator's Well Number
653456 Cain 987
3) API Well No.: 47 021 - 03114
State County Permit

STATE OF WEST VIRGINIA - BUREAU OF ENVIRONMENT
DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL & GAS
NOTICE AND APPLICATION TO PLUG AND ABANDON WELL

4) Surface Owner(s) to be served:	5) (a) Coal Operator:
(a) Name <u>Peggy Ann Cain</u> ✓	Name <u>None</u>
Address <u>P.O. Box 394</u>	Address _____
<u>Glenville, WV 26351-0394</u>	_____
(b) Name _____	(b) Coal Owner(s) with Declaration
Address _____	Name <u>Peggy Ann Cain</u> ✓
_____	<u>P.O. Box 394</u>
_____	Address <u>Glenville, WV 26351-0394</u>
(c) Name _____	Name <u>Waco Oil & Gas Co. Inc</u> ✓
Address _____	Address <u>Attn: Stephen E Holloway</u>
_____	<u>P.O. Box 397</u>
_____	<u>Glenville, WV 26351-0397</u>
6) Inspector <u>Bryan Harris</u> ✓	(c) Coal Lessee with Declaration
Address <u>P.O. Box 157</u>	Name <u>None</u>
<u>Volga WV 26238</u>	Address _____
Telephone <u>304.553.6087</u>	_____
_____	_____

TO THE PERSONS NAMED ABOVE:

You should have received this Form and the following documents:

- (1) The application to Plug and Abandon a Well on Form WW-4B, which sets out the parties involved in the work and describes the well its and the plugging work order; and
- (2) The plat (surveyor's map) showing the well location on Form WW-6.

The reason you received these documents is that you have rights regarding the application which are summarized in the instructions on the reverses side. However, you are not required to take any action at all.

Take notice that under Chapter 22-6 of the West Virginia Code, the undersigned well operator proposes to file or has filed this Notice and Application and accompanying documents for a permit to plug and abandon a well with the Chief of the Office of Oil and Gas, West Virginia Division of Environmental Protection, with respect to the well at the location described on the attached Application and depicted on the attached Form WW-6. Copies of this Notice, the Application, and the plat have been mailed by registered or certified mail or delivered by hand to the person(s) named above (or by publication in certain circumstances) on or before the day of mailing or delivery to the Chief.



OFFICIAL SEAL
STATE OF WEST VIRGINIA
NOTARY PUBLIC
Pamela Sykes
EOT Production
PO Box 280
Bridgeport, WV 26330
My Commission Expires Aug. 24, 2022

Well Operator:
By: _____
Us: _____
Address: _____
Telephone: _____

EQT Production Company

Victoria J. Roark

Permitting Supervisor

PO Box 280

Bridgeport, WV 26330

(304) 848-0076

Subscribed and sworn before me this

31

day of

Oct.

2013

Notary Public

My Commission Expires:

8-24-22

The Office of Oil & Gas processes your personal information, such as name, address and phone number, as part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use of your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL & GAS
CONSTRUCTION AND RECLAMATION PLAN AND SITE REGISTRATION APPLICATION FORM
GENERAL PERMIT FOR OIL AND GAS PIT WASTE DISCHARGE

Operator Name: EQT PRODUCTION COMPANY OP ID: _____

Watershed: Crooked Run of Cedar Creek of Little Kanawha River Quadrangle: Tanner 7.5'

Elevation: 1024 County: Gilmer District: Center

Description of anticipated Pit Waste: Formation Fluids

Do you anticipate using more than 5,000 bbls of water to complete the proposed well work? Yes___ No X

Will synthetic liner be used in the pit? Yes Is so, what ml.? 30 ml

Proposed Disposal Method for Treated Pit Wastes:

- ☒ Land Application
☐ Underground Injection - UIC Permit Number _____
☐ Reuse (at API Number) _____
☐ Offsite Disposal Permit #. _____
☐ Other: Explain _____

Drilling medium anticipated for this well? Air, freshwater, oil based, etc. _____

If oil based, what type? Synthetic, petroleum, etc. _____

Additives to be used? _____

Will closed loop system be used? _____

Drill Cuttings disposal method? Leave in pit, landfill, remove offsite, etc. _____

If left in pit and plan to solidify what medium will be used? Cement, Lime, sawdust _____

Landfill or offsite name/permit number? _____

I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issued on August 1, 2005, by the Office of Oil and Gas of the West Virginia Division of Environmental Protection. I understand that the provisions of the permit are enforceable by law. Violations of any terms or condition of the general permit and/or other applicable law or regulation can lead to enforcement action.

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments thereto and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment.

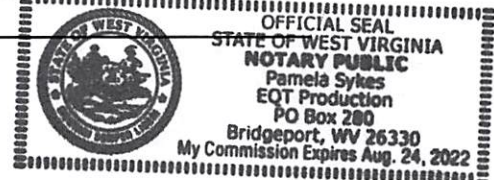
Company Official Signature 

Company Official (Typed or Printed) Victoria Roark

Company Official Title Permitting Supervisor-WV

Subscribed and sworn before me this 31 day of Oct, 2013

My Commission Expires 8-24-22 Notary Public

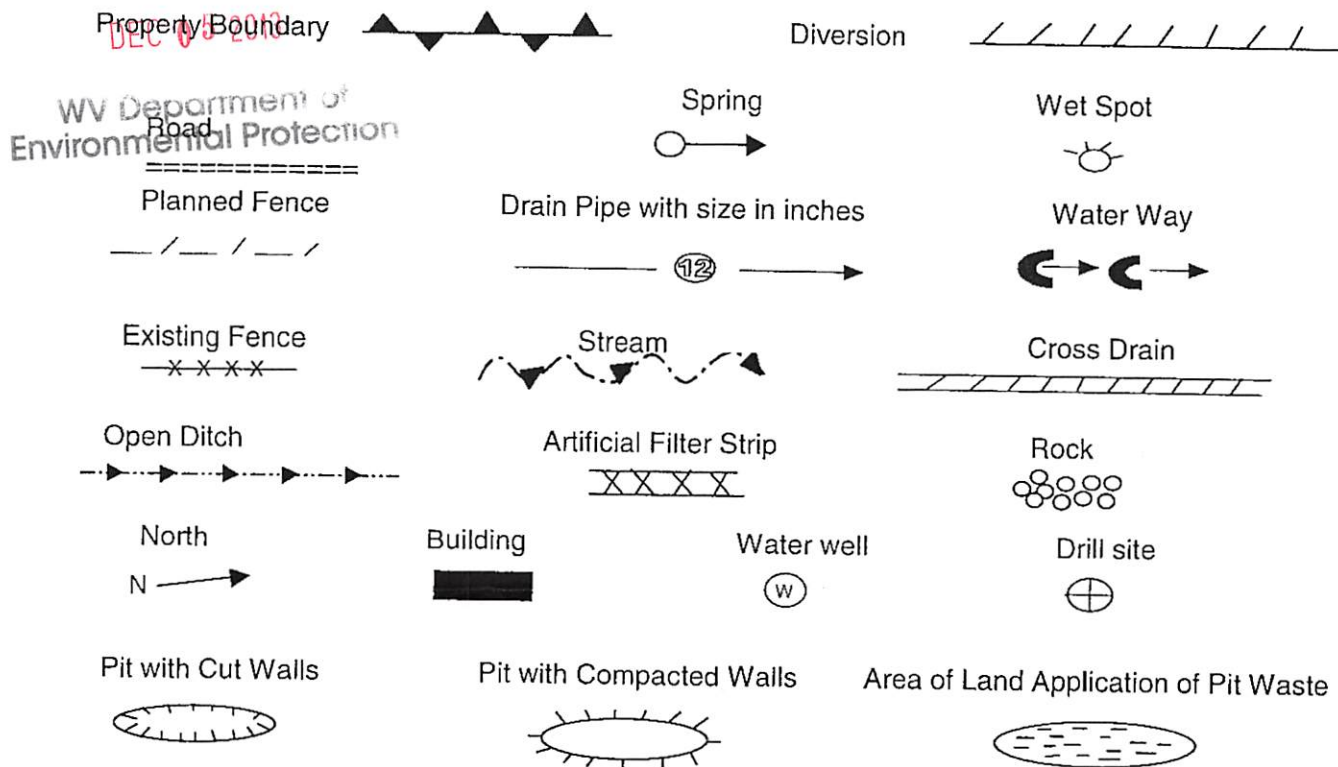


2103114P

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Office of Oil and Gas

OPERATOR'S WELL NO.:
653456 Cain 987

LEGEND



Proposed Revegetation Treatment: Acres Disturbed: 1± Prevegetation pH 5.8

Lime 3 Tons/acre or to correct to pH 6.5

Fertilizer (10-20-20) or equivalent 1/3 ton lbs/acre (500 lbs minimum)

Mulch 2 Tons/acre or hydroseed.

SEED MIXTURES

Area I

Seed Type	lbs/acre
KY-31	40
Alsike Clover	5
Annual Rye	15

Area II

Seed Type	lbs/acre
Orchard Grass	15
Alsike Clover	5

ATTACH:

Drawing(s) of road, location, pit and proposed area for land application.
Photocopies section of involved 7.5' topographic sheet.

Plan approved by: Bryan H. [Signature]

Comments: _____

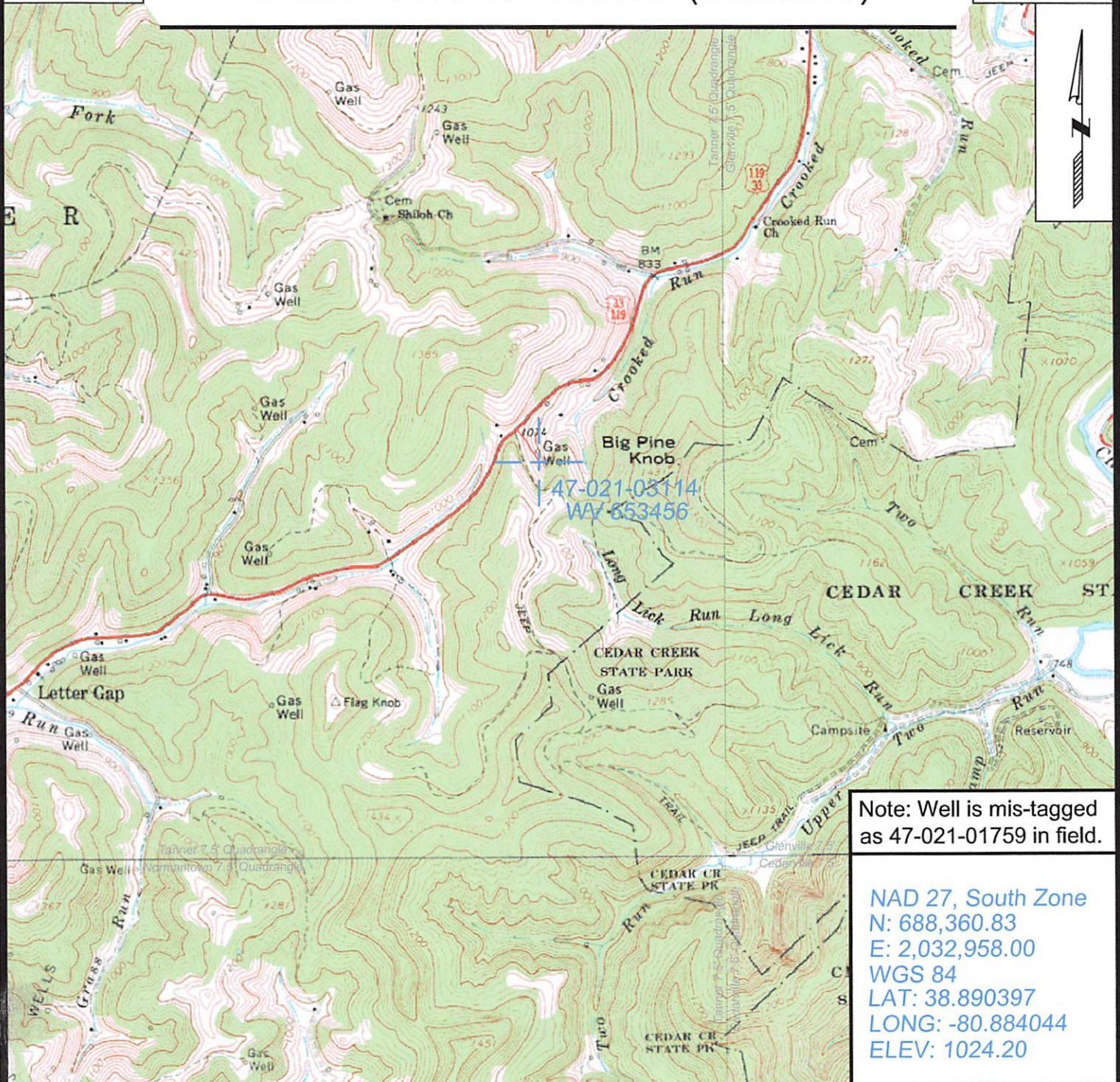
Title: Oil & Gas Inspector Date: 12-4-13

Field Reviewed? X Yes No

Topo Quad: Tanner 7.5' Scale: 1" = 2000'
 County: Gilmer Date: September 27, 2013
 District: Center Project No: 25-19-00-07

47-021-03114 WV 653456 (Cain #987)

Topo



Note: Well is mis-tagged as 47-021-01759 in field.

NAD 27, South Zone
 N: 688,360.83
 E: 2,032,958.00
 WGS 84
 LAT: 38.890397
 LONG: -80.884044
 ELEV: 1024.20



SURVEYING AND MAPPING SERVICES PERFORMED BY:
ALLEGHENY SURVEYS, INC.
 1-800-482-8606
 P.O. BOX 438
 BIRCH RIVER, WV 26610
 PH: (304) 649-8606
 FAX: (304) 649-8608

PREPARED FOR:

EQT Production Company
 P.O. Box 280
 Bridgeport, WV 26330

2103114P

WW-7
8-30-06



West Virginia Department of Environmental Protection
Office of Oil and Gas
WELL LOCATION FORM: GPS

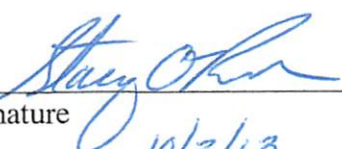
API: 47-021-03114 WELL NO.: WV 653456 (Cain #987)
FARM NAME: A. A. Cain
RESPONSIBLE PARTY NAME: EQT Production Company
COUNTY: Gilmer DISTRICT: Center
QUADRANGLE: Tanner 7.5'
SURFACE OWNER: John Wesley Cain
ROYALTY OWNER: A. A. Cain Heirs, et al.
UTM GPS NORTHING: 4304620
UTM GPS EASTING: 510056 GPS ELEVATION: 312 m (1024 ft)

The Responsible Party named above has chosen to submit GPS coordinates in lieu of preparing a new well location plat for a plugging permit or assigned API number on the above well. The Office of Oil and Gas will not accept GPS coordinates that do not meet the following requirements:

1. Datum: NAD 1983, Zone: 17 North, Coordinate Units: meters, Altitude: height above mean sea level (MSL) – meters.
2. Accuracy to Datum – 3.05 meters
3. Data Collection Method:
Survey grade GPS : Post Processed Differential
Real-Time Differential
Mapping Grade GPS X: Post Processed Differential X
Real-Time Differential

4. **Letter size copy of the topography map showing the well location.**

I the undersigned, hereby certify this data is correct to the best of my knowledge and belief and shows all the information required by law and the regulations issued and prescribed by the Office of Oil and Gas.

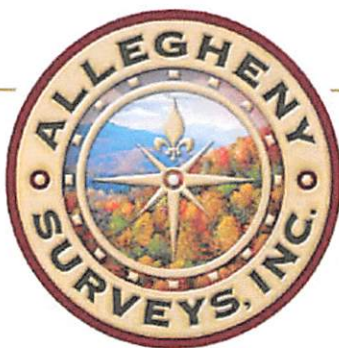

Signature
10/3/13
Date

PS # 2180
Title

RECEIVED
Office of Oil and Gas

NOV 01 2013

WV Department of
Environmental Protection



POTENTIAL WATER SAMPLE DATA SHEET

CLIENT: EQT PRODUCTION COMPANY
 LEASE NAME AND WELL No. A. A. Cain #987 - WV 658456 - 47-021-03114

The initial mapping review of the area surrounding the proposed well site revealed the below listed surface owner(s) that were potentially utilizing groundwater (potable) for Human Consumption or other purposes within 1000' of the existing well site. The following landowners will be notified of the opportunity to request a water sample.

*Please note that the following information is subject to change upon field inspection.

POTENTIAL SAMPLE LOCATIONS

Site: 1 Spacing: 670' +/- Owner: Louis S. and Marsha M. Arden
 Address: 5458 US HWY 33 West, Glenville, WV 26351 Phone No. 304.xxx.xxxx
 Comments:

Site: 2 Spacing: 800' +/- Owner: Louis S. and Marsha M. Arden
 Address: 5458 US HWY 33 West, Glenville, WV 26351 Phone No. 304.xxx.xxxx
 Comments:

Site: 3 Spacing: 830' +/- Owner: Peggy Ann Cain
 Address: P.O. Box 394, Glenville, WV 26351 Phone No. 304.462.7845
 Comments:

Site: 4 Spacing: 730' +/- Owner: Peggy Ann Cain
 Address: P.O. Box 394, Glenville, WV 26351 Phone No. 304.462.7845
 Comments:

BIRCH RIVER OFFICE
 P.O. Box 438 • 237 Birch River Road
 Birch River, WV 26610
 phone: 304-649-8606
 fax: 304-649-8608

BRIDGEPORT OFFICE
 172 Thompson Drive
 Bridgeport, WV 26330
 phone: 304-848-5035
 fax: 304-848-5037

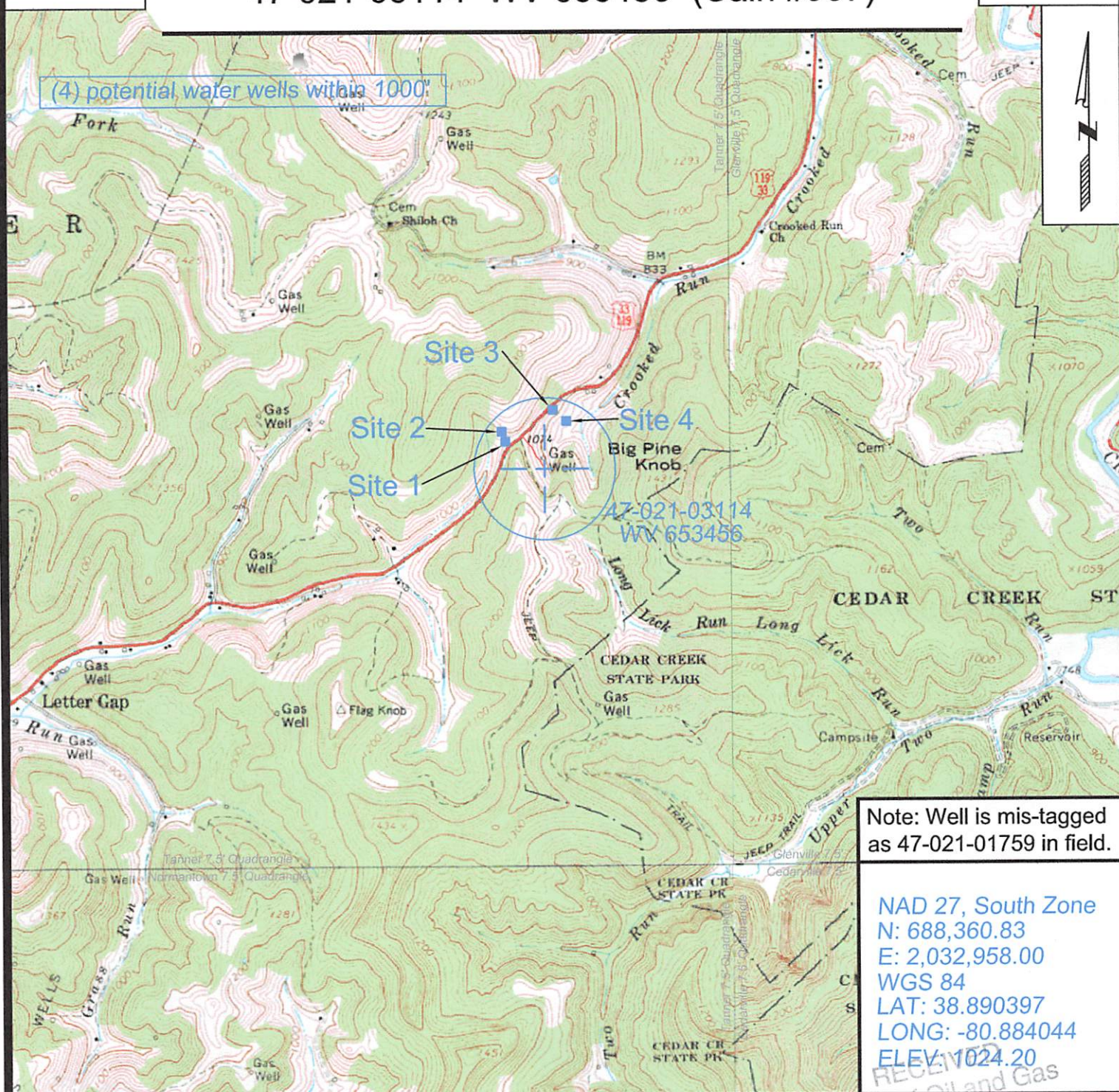
CALDWELL OFFICE
 212 Cumberland Street
 Caldwell, OH 43724
 phone: 740-305-5007
 fax: 740-305-5126

ALUM CREEK OFFICE
 P.O. Box 108 • 1413 Childress Road
 Alum Creek, WV 25003
 phone: 304-756-2949
 fax: 304-756-2948

Topo Quad: Tanner 7.5'Scale: 1" = 2000'County: GilmerDate: September 27, 2013District: CenterProject No: 25-19-00-07

Water

47-021-03114 WV 653456 (Cain #987)



SURVEYING AND MAPPING SERVICES PERFORMED BY:

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PREPARED FOR:

EQT Production Company

P.O. Box 280
Bridgeport, WV 26330